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December 9, 2003, 14:17:59; Search time 2795 Seconds (without alignments) 6410.882 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Listing first 45 summaries
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Result No. S		k o (
	Score	Query Match	Length	DB	QI	1	Descri	iption
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	423.6	יי טיי		v o	AR062963		AR062	963 Sequence
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	421.4	. 01		σ	HUMHEMOB		M2511	3 Human sickl
	420.4	0, 0		ωų	AR032231		AR032	231 Sequence
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	420.4	1 01		ω (132884		13288	4 Sequence 9
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	374.7				AY034468		AY034	468 Homo sapi
	376.8			, vo	AX400061		AX400	061 Sequence
	376	~			AF181832		AF181	832 Homo sapi
	374.6				AR050454		AR050	454 Sequence 582 Sequence
	353.2	.			OCBGL2		V0087	9 Messender R
	353.2	٠.			RABHBBA		M1084	3 Rabbit beta
	353.2	~			AX419806		AX419	806 Sequence
	350.4	~ .			BD025503	•	BD025	503 Sequence
	347.2				AX448896		AX448	896 Sequence
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RESULT 1								
A01592 LOCUS				,		DNA	linear	PAT 08-MAR-199
DEFINITION ACCESSION		Human hael A01592	emoglobin	ď	beta chain.			
VERSION		1592.1	GI:344421	421				
KEYWORDS				(human)				
ORGANISM		Homo sapiens Eukaryota, M	ens ; Metaz	9	Chordata; Cr	Craniata; Vertebrata;	rtebrata; Hominidae.	Euteleostomi;
REFERENCE		mmalla; (bases	butneria; 1 to 438)	38)			nominitage	
AUTHORS		BLOOD SUB	SUBSTITUTES	ន្ទ				

RESULT 1	
A01592	
LOCUS	A01592 1438 bp DNA linear PAT 08-MAR-1993
DEFINITION	Human haemoglobin A beta chain.
ACCESSION	A01592
VERSION	A01592.1 GI:344421
KEYWORDS	•
SOURCE	Homo sapiens (human)
ORGANISM	Homo sapiens
	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
	Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
REFERENCE	1 (bases 1 to 438)
AUTHORS	
TITLE	BLOOD SUBSTITUTES
JOURNAL	Patent: WO 8809179-A 10 01-DEC-1988;

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PAT 16-MAY-2001
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De Angelo, J., Motwani, N.M., Bajwa, W. and Bonaventura, J.
Expression of recombinant hemoglobin and hemoglobin variants in
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                                     Score 428.4; DB Pred. No. 7e-93; 0; Mismatches
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AR124584
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ACCESSION
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FEATURES
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/db_xref="G1:344422"
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De Angelo, J., Motwani, N.M., Bajwa, W. and
Expression of recombinant hemoglobin and
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/db_rref="taxon:9606"
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                                                     Library was constructed by Dr. Hiroshi Inoue DNA sequencing by:
Mashington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi Inoue
(hinoue@imgate.wustl.edu)
Putative full length read
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Bullalus - 20892, USA
Tel: 301 402 2373
Fax: 301 435 5148
Fax: 301 435 5148
Email: jm/f@nih.gov
The 'cl' library was constructed by Alexander Gubin, Ph.D. in the Laboratory of Chemical Biology, NIDDK, NIH. DNA Sequencing and/or analyses by National Institutes of Health Intramural Sequencing Center (NISC). More information available at: http://hembase.niddk.nih.gov
Plate: 34 row: f column: 02
Seq primer: 5' lambda-TriplEx2 Sequencing Primer.
Location/Qualifiers

. 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   // note="Organ: blood; Vector: pTriplEx2; Site 1: Sfil; Site_2: Siil; A complementary DNA (cDNA) library from human erythroid precursor cells was constructed using SWART PCR (polymerase chain reaction) cDNA Library Construction Kit (Clontech, Palo Alto, CA) according to the manufacturer's directions, but with slight modifications. Briefly, reverse transcription was performed in the presence of 1 umol/L peptide nucleic acid (PNA) oligos (N-terminal) and (N-terminal)-biotin-CGC-AAG-CTT-G-(C-terminal) and (N-terminal)-biotin-CGT/C)T-GAA-GTT-CTC-AAG-A-(C-terminal). Synthesized cDNA was digested with Sfil and size-selected on a 1% agarose gel (>800bp). Large-scale sequencing of the library was performed by the NIH Intramural Sequencing Center (NISC; Http://www.nisc.nih.gov/)."
                                                                                                                                                                                                                                                                                                                                                                            Unpublished
Contact: Jeffery L. Miller
Laboratory of Chemical Biology
National Institute of Diabetes and Digestive and Kidney Diseases
Building 10, Room 9B17, National Institutes of Health, Bethesda, MD
cl34f02.zl Hembase; Erythroid Precursor Cells (LCB:cl library) Homo sapiens cDNA clone cl34f02 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 515)
Gubin, A.N., Lee, Y.T., Bouffard, G.G. and Miller, J.L.
Gene Expression in Human Erythroid Precursor Cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="Precursor erythroblasts; GPA++"
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/clone_lib="Hembase; Brythroid Precursor Cells (LCB:cl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="blood"
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/cell_line="Primary Culture of Peripheral Blood
Mononuclear Cells"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BU658312.1 GI:23370494
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                                                                                                                                                               Homo sapiens (human)
Homo sapiens
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December 9, 2003, 15:17:59; Search time 290 Seconds (without alignments) 5019.781 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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                                                                                                                                                                                                                                            Run on:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Seguence 14, Appl	Sequence 9489, Ap	Sequence 3, Appli	Sequence 32, Appl	Sequence 22, Appl	Sequence 5, Appli	Sequence 7, Appli	Sequence 5, Appli	Sequence 7, Appli	Sequence 5, Appli	Sequence 7, Appli	Sequence 9, Appli	Sequence 36836, A	Sequence 2305, Ap	Sequence 9446, Ap
αı	US-09-782-378A-14	US-10-198-846-9489	US-09-839-164-3	US-10-085-853-32	US-10-128-581-22	US-09-986-60-5	US-09-986-60-7	US-09-986-667-5	US-09-986-667-7	US-09-986-633-5	US-09-986-633-7	US-10-280-679B-9	US-09-918-995-36836	US-09-880-107-2305	US-10-198-846-9446
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ouery Match Length DB	625	809	438	438	438	1140	1140	1140	1140	1140	1140	743	453	468	626
% Query Match	97.8	97.8	97.1	97.1	97.1	96.3	96.3	96.3	96.3	96.3	96.3	96.0	92.1	89.8	87.8
Score	428.4	428.4	425.2	425.2	425.2	422	422	422	422	422	422	420.4	403.4	393.2	384.4
Result No.		7	m	4	Ŋ	9	7	00	0	10	11	12	13	14	15

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16 376.4 85.9 431 11 US-09-918-995-18247 17 372.4 85.0 464 11 US-09-918-995-31979 18 362.6 82.8 415 11 US-09-918-995-31979 20 357.2 81.6 407 11 US-09-918-995-16485 21 356.4 81.4 407 11 US-09-918-995-36742 22 355.4 81.4 407 11 US-09-918-995-36742 24 353.8 80.8 675 11 US-09-918-995-36742 25 351.8 80.0 689 11 US-09-918-995-36742 26 351.8 80.3 529 15 US-09-918-995-3673 27 360.4 407 11 US-09-918-995-3673 28 352.8 74.4 80.2 11 US-09-918-995-36138 29 32.8 74.4 365 11 US-09-918-995-36138 20 313.4 71.6 90.2 15 US-109-918-995-3033 310 70.8 613 10 US-09-18-995-18654 35 300 68.5 347 11 US-09-918-995-18654 36 69.4 412 11 US-09-918-995-18654 37 296.8 66.4 368 11 US-09-918-995-18044 272.6 62.2 339 11 US-09-918-995-18057 43 250.6 57.2 424 11 US-09-918-995-18256 44 239 54.6 57.2 424 11 US-09-918-995-1825 44 233 45.3 3 US-09-814-353-17210	18247, A	e-i	19	37	16	36	36	36	14	36	20	36	ω H	30	67	ģ	, ·	ດັ	18	36	18	36	13	18	 	262, Ap	32565,	17210,	21253,	122, A
16 376.4 85.9 431 11 US-09-918-995-1824 17 372.4 85.0 464 11 US-09-918-995-1639 18 362.6 82.8 410 11 US-09-918-995-1639 20 357.2 81.6 407 11 US-09-918-995-3655 21 356.4 81.4 402 11 US-09-918-995-3655 22 356.4 81.4 402 11 US-09-918-995-3655 23 353.8 80.8 402 11 US-09-918-995-3674 24 355.2 80.4 407 11 US-09-918-995-3674 25 351.8 80.3 407 11 US-09-918-995-3673 26 351.8 80.3 400 11 US-09-918-995-3613 27 351.4 80.2 411 US-09-918-995-3613 28 342.8 71.6 400 11 US-09-918-995-3613 29 35.4 400 11 US-09-918-995-3613	Sednence	ednenc	equenc	ednenc	equenc	equenc	equenc	equenc	ednenc	Sequence	Sequence	Seguence	Segnence	Seguence	Sednence	Sequence	Sequence	Seguence	Sednence	Sequence	Seguence	Seguence	Sequence	Sequence	equenc	ednenc	equenc	Seguence		eguenc
16 376.4 85.9 431 11 372.4 85.0 464 118 362.6 82.8 415 12 356.4 82.3 410 12 356.4 81.4 402 12 356.4 81.4 402 12 356.4 81.4 402 12 356.4 81.4 402 12 356.4 81.4 402 12 356.4 81.4 407 12 356.4 80.2 411 12 25 351.4 80.2 411 12 28 326 74.4 365 33 310 70.8 620 31 310 70.8 620 31 305.4 69.7 345 343 305.4 64.9 348 39 284.4 64.9 343 344 255.8 58.6 424 412 256.8 58.6 424 422 44 233 455.3 562 441 255.8 58.6 424 422 44 233 455.3 350 54.6 57.2 424 44 233 34 55.3 35.4 53.3 562 444 233 35.4 53.3 562 424	-09-918-995-1824	-09-918-995-3197	-09-918-995-1639	-09-918-995-3711	-09-918-995-1648	-09-918-995-3655	-09-918-995-3674	-09-918-995-3687	-09-882-945A-14	-09-918-995-3613	-10-066-543-208	-09-918-995-3603	-09-918-995-1808	-09-918-995-3013	-10-198-846-671	-09-147-490-	-09-147-490-	-09-147-490-	-09-918-995-1865	-09-918-995-3637	-09-918-995-1804	-09-918-995-3691	-09-918-995-1907	-09-918-995-1896	-09-918-995-1815	-10-044-090-262	-09-918-995-3256	-09-814-353-1721	-09-814-353-2125	-10-393-602-12
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16 376. 17 372. 18 362. 20 357. 21 356. 22 353. 23 353. 24 353. 25 353. 26 351. 27 351. 28 351. 29 351. 31 351. 31 351. 31 351. 31 351. 32 351. 33 351. 34 351. 37 351. 38 351. 37 351. 38 361. 37 361. 38 361. 38 361. 39 37 37. 31 37 37. 31 37 37. 31 37 37. 32 37 37. 34 361. 36 37 37. 37 37 37. 38 37 37. 38 37 37. 39 37 37. 30 37 37. 31 37 37. 31 37 37. 32 37 37. 34 36. 36 37 37. 37 37 37. 38 37 37. 38 37 37. 38 37 37. 38 37 37. 39 37 37. 30 37 37. 31 37 37. 31 37 37. 32 37 37. 34 37 37. 36 37 37. 37 37 37. 38 37 37. 38 37 37. 38 37 37. 39 37 37. 30 37 37 37 37 37. 30 37 37 37 37 37. 30 37 37 37 37 37 37 37 37 37 37 37 37 37	85.9			_								ς.	m	< t	-		Ö	6	0	თ	σ,		ú	4	4	0	8	7	4	'n
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ALIGNMENTS

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61 GAIGAAGIIGGIGGIGAGGCCCTGGGCAGGCTGGTGGTGGTCTACCCTTGGACCCAGAGG 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 97.8%; Score 428.4; DB 10; Best Local Similarity 98.6%; Pred. No. 1.6e-123; Matches 432; Conservative 0; Mismatches 6;
                               Sequence 14, Application US/09782378A; Sequence 14, Application US/09782378A; Patent No. US20020102731A1; GENERAL INFORMATION:

APPLICANT: Hearing, Patrick
APPLICANT: Bahou, Wadie
APPLICANT: Sandalon, Ziv
APPLICANT: Gnatenko, Dmitri
TITLE OF INVENTION: Adenoviral Vectors
FILLE REFERENCE: STONYB-04970
CURRENT FILLING DATE: 2001-02-12
PRIOR PPLICATION NUMBER: 60/237,747
PRIOR FILLING DATE: 2000-10-02
NUMBER OF SEQ ID NOS: 27
SOFTWARE: Patentin version 3.0
SEQ ID NO 14
LENGTH: 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens
RESULT 1
US-09-782-378A-14
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61 GATGAAGTTGGTGAGGCCCTGGGCAGGCTGCTGGTGTCTACCCTTGGACCCCAGAGG 120
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309 CTCAAGGGCACCTTTGCCACACTGAGTGAGCTGCACTGTGACAAGCTGCACGTGGATCCT
                                                                                            369 chahachreacerecrecedechaererecrecrerererecrecemental
                                                                                                                                      GAATTCACCCCACCAGTGCAGGCTGCCTATCAGAAAGTGGTGGCTGGTGTGGCTAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STEM CELL PROLIFERATION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD, 8th FLOOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 97.1%; Score 425.2; DB 9;
Best Local Similarity 98.2%; Pred. No. 1.5e-122;
Matches 430; Conservative 0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 08/477,668
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/316,424
FILING DATE: 30-SEP-1994
APPLICATION NUMBER: PCT/US94/03349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: ARLINGTON
STATE: VIRGINIA
COUNTRY: U.S.A.
ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: 1.44 Mb diskette
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: MS Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/839,164
FILING DATE: 23-Apr-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
MOLECULE TYPE: DNA (cDNA)
SEQUENCE DESCRIPTION: SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: INHIBITOR OF USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 29-MAR-1994
APPLICATION NUMBER: US 08
FILING DATE: 31-MAR-1993
RMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/09839164 Patent No. US20020098583A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 438 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: KOZLOV, VLADIMIR
                                                                                                                                                                                                                                 421 CIGGCCCACAGIATCAC 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR
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                                                                234 AAGGCTCATGGCAAGAAAGTGCTCGGTGCCTTTAGTGATGGCCTGGCTCACCTGGACCAC
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Best Local Similarity 98.6%; Pred. No. 1.7e-123;
Matches 432; Conservative 0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-198-846-9489

US-10-198-846-9489

Sequence 9489, Application US/10198846

Publication No. US2003009974A1

GENERAL INFORMATION:

APPLICANT: Lillie, James

APPLICANT: Wang, Youzhen

APPLICANT: Steinmann, Kathleen

TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, K.

TITLE OF INVENTION: THERAPY OF BREAST CANCER

TITLE OF INVENTION: THERAPY OF BREAST CANCER

FILE REFERENCE: MRI-049

CURRENT APPLICATION NUMBER: US/10/198,846

CURRENT FILING DATE: 2002-07-18

PRIOR APPLICATION NUMBER: 60/306,220

PRIOR FILING DATE: 2001-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 14084
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9489
LENGTH: 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc feature
LOCATION: 3, 4, 8, 24, 656, 770, 775
CTHER INFORMATION: n = A,T,C or G
US-10-198-846-9489
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Ouery Match 97.8%; Score 428.4; DB 1; Length 438; Best Local Similarity 98.6%; Pred. No. 4.1e-110; Matches 432; Conservative 0; Mismatches 6; Indels 0
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                                                                    December 9, 2003, 14:24:49 ; Search time 64 Seconds (without alignments) 3020.716 Million cell updates/sec
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Sequence 4
Sequence 1
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Sequence 3
Sequence 1
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Seguence 6
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                                                                                                                                           1 gtgcacctgactcctgagga......ccctggcccacaagtatcac
                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6A_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-381-175A-4
US-08-463-160B-6
US-09-031-361-4
US-08-627-173-17
US-08-535-882A-17
US-08-316-424A-3
US-08-316-424A-3
US-08-316-32A-32
US-08-477-669-3
US-08-477-669-3
US-08-483-502-9
US-09-598-218-5
US-09-598-218-5
US-09-598-218-5
US-09-598-218-5
US-08-484-341-9
US-08-484-686B-4
US-08-484-686B-4
US-08-483-920-9
US-08-484-686B-4
US-08-484-686B-4
US-08-463-160B-4
                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                     569978 seqs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                               nucleic search, using sw model
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Gapop 10.0 , Gapext 1.0
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Maximum DB seq length: 200000000
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Match Length
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96.3
96.3
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374.6
374.6
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286.6
286.6
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Sequence:
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Sequence 122,
Sequence 122,
                                                                        Sequence 10,
Sequence 10,
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                                                                                                                 Sequence 4, Sequence 4, Sequence 4,
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Sequence 4,
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Sequence
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Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 80301
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
          US-08-484-686B-2
US-08-463-160B-2
US-08-463-160B-3
US-08-463-160B-3
US-08-463-160B-3
US-08-463-160B-10
US-08-463-160B-10
US-08-74-144-4
US-08-775-164-4
US-08-775-164-4
US-08-775-609-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: No. 5563254ak, Henry P.
REGISTRATION NUMBER: 33200
REFERENCE/DOCKET NUMBER: Hoffman 2A/CONTZ
TELECOMMUNICATION INFORMATION:
TELEPHONE: 303-541-3322
                                                                                                                                                                                        US-08-592-126-122
US-09-168-595-122
                                                                                                                                                                                                                     PCT-US96-09430-15
                                                                                                                                                                                                                                                    PCT-US94-06661-1
                                                                                                                                                                           PCT-US93-06828-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 438
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: unknown to applicant
MOLECULE TYPE: Other nucleic acid
DESCRIPTION: Human beta globin sequence
                                                                                                                                                                                                                                   US-08-076-090-1
                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/08170095B; Batent No. 5563254; GENERAL INFORMATION:

APPLICANT: Hoffman, Stephen J.

APPLICANT: Nagai, Kiyoshi

TITLE OF INVENTION: Blood Substitutes;

NUMBER OF SEQUENCES: 36

CORRESPONDENCE ADDRESS:

ADDRESSEE: Somatogen, Inc.

STREET: 2545 Central Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.0.1
SOFTWARE: Microsoft Word 5.0a
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/170,095B
FILING DATE: December 20, 1993
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFRAX: 303-444-3013
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 2545 Cent
CITY: Boulder
STATE: Colorado
ZIP: 80301
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; Sequence 6, Application US/08484686B
; Patent No. 5827693
; GENERAL INFORMATION:
; APPLICANT: De Angelo, Joseph
; APPLICANT: Motwani, Nalini
APPLICANT: Bajwa, Wajeeh
; TITLE OF INVENTION: Expression of Recombinant Hemoglobin and
; TITLE OF INVENTION: Hemoglobin Variants in Yeast
; NUMBER OF SEQUENCES: 71
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Pennie & Edmonds LLP
; STREET: 1155 Avenue of the Americas
; CITY: New York
; COUNTRY: USA
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                                          Length 438;
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,686B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                      Score 428.4; DB 1;
Pred. No. 4.1e-110;
0; Mismatches 6;
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APPLICATION NUMBER: US 08/368,407
FILING DATE: 29-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/876,290
FILING DATE: 29-APR-1992
PRIOR APPLICATION DATA:
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Best Local Similarity 98.6
Matches 432, Conservative
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US-08-484-686B-6
US-08-396-866-4
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 GATGAAGTTGGTGGTGAGGCCCTGGGCAGGCTGCTGGTGGTCTACCCTTGGACCCAGAGG 120
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STREET: 5797 Central Avenue
CITY: Boulder
STATE: Colorado
ZIP: 80301
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.0.1
SOFTWARE: Microsoft Word 5.0a
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/396,866
FILLING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: unknown to applicant
MOLECULE TYPE: Other nucleic acid
DESCRIPTION: Human beta globin sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/08396866

Patent No. 5561124

GENERAL INFORMATION:

APPLICANT: Hoffman, Stephen J.

APPLICANT: Nagai, Kiyoshi

TITLE OF INVENTION: Blood Substitutes

NUMBER OF SEQUENCES: 34

CORRESPONDENCE ADDRESS:

ADDRESSEE: Somatogen, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/062,780
FILING DATE: May 17, 1993
ATORNEY/AGENT INFORMATION:
NAME: No. 5661124ak, Henry P.
REGISTRATION NUMBER: 33200
REFERENCE/DOCKET NUMBER: Hoffman
REFERENCE/DOCKET NUMBER: 2A/CONTI
TELECOMMUNICATION INFORMATION:
TELEPHONE: 303-541-3322
TELEFAX: 303-444-3013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGCCCACAAGTATCAC 438
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TELEFAX: 303-444-3013
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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4237.827 Million cell updates/sec
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1: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*

2: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1982.DAT:*

3: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*

4: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

5: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

7: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*

8: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*

9: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*

10: /SIDS1/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*
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                                                                                                                     9, 2003, 14:17:18 ; Search time 279 Seconds
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
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AAF31396
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Maximum DB seq length: 2000000000
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Perfect score:
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Beta-globin; haemoglobin, Hb Prisca, human; mutant; blood substitute; antianaemic; oxygen-carrier; ss. ALIGNMENTS ONA encoding human mutant beta-globin AAZ94729 standard; DNA; 438 BP 99WO-US22756. 98US-0102640. (first entry WPI; 2000-293112/25. P-PSDB; AAY79378. (UTEM) UNIV TEMPLE WO200018802-A1. Fronticelli C; Homo sapiens. Synthetic. 30-SEP-1999; 01-OCT-1998; 06-APR-2000. 01-AUG-2000 RESULT 1 AAZ94729

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Mutant human beta-globin polypeptides used for generating a blood substitute to supplement the oxygen-carrying capacity of a patient's blood comprises substitution or deletion of native cysteine residues
                                                                                                              The present sequence is that of DNA encoding a mutant human beta-globin (see AAY79378) in which the native Ser-9 residue of human beta-globin is substituted by Cys, native Cys-93 is substituted by Ala, and native Cys-112 is substituted by Gly. A haemoglobin comprising the mutant beta-globin and normal alpha-globin is termed Hb-Prisca and is characterised as having it a useful blood substitute. Since the tetrameric haemoglobin molecule Hb prisca contains 2 beta-globin molecules and 2 alpha-globin molecules, the 3-position mutation results in a total of 6 mutations per tetramer. These mutations allow for proper folding of the recombinant product and increased yield. The mutant tetramers (64 kDa) equilibrate to form a homogeneous haemoglobin polymer of 7 tetramers (450 kDa). Vectors and transformed host cells for producing the beta-globin mutants are
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 438; DB 21; Length 438; 100.0%; Pred. No. 3.3e-105; tive 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 438 BP; 85 A; 114 C; 137 G; 102 T; 0 other;
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                                                                                 Claim 6; Page 34-35; 42pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to a substantially pure globin chain which is free of erythrocyte membrane components, sscherichia coli endotoxins and mammalian cell components. The globin combined with a source of heme is useful for producing hemoglobin, which in turn is useful as physiological oxygen carrier in blood substitute solutions and in plasma expanders or in applications
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Matches 432; Conservative
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